

REMARKS

This Amendment and Response to Non-Final Office Action is being submitted in response to the non-final Office Action mailed April 30, 2007. Claims 1-19 are pending in the Application.

Claims 1-10, 14, 15, and 17-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,412,652 (“Lu”) in view of U.S. Patent App. 2003/0086368 A1 (“Limaye”), and in further view of U.S. Patent No. 6,292,463 B1 (“Burns”).

Claims 11-13 and 16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lu in view of Limaye, and further in view of Burns, and still further in view of U.S. Patent No. 6,343,083 B1 (“Mendelson”).

In response to these rejections, Claims 1, 14, 18, and 19 have been amended and Claim 17 has been canceled to further clarify the subject matter which Applicants regard as the invention, without prejudice or disclaimer to continued examination on the merits. These amendments are fully supported in the Specification, Drawings, and Claims of the Application and no new matter has been added. Based upon the amendments, reconsideration of the Application is respectfully requested, without further search, in view of the following remarks.

**Rejection of Claims 1-10, 14, 15, and 17-19 Under 35 U.S.C. §103(a) –
Lu, Limaye, and Burns**

Claims 1-10, 14, 15, and 17-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,412,652 (“Lu”) in view of U.S. Patent App. 2003/0086368 A1 (“Limaye”), and in further view of U.S. Patent No. 6,292,463 B1 (“Burns”).

Examiner cites the “logical conduit” in Limaye as a signaling and routing protocol.¹ In Limaye, the logical conduit is a node connected between two or more ring networks that provides for recovery in the mesh network in the event of a failure of another internetworking

¹ Non-Final OA, p. 4

node.² Applicants respectfully submit that this does not teach a signaling and routing protocol for discovering neighbors of each node in the network and link status, for distributing routing topology information and optimal route determination, and for automatically defining routes for permanent sub-network connections.

With regard to independent Claim 1, Applicants have added two additional method steps for discovering network topology and link status and for distributing information. Both of these steps utilize the signaling and routing protocol. Additionally, Applicants have added a limitation in the defining a route step clarifying the route can be defined explicitly or automatically through the signaling and routing protocol. Finally, Applicants have removed the previously added limitations related to mesh structure and SONET/SDH.

Specifically, independent Claim 1 has been amended to recite:

1. A method for creating a permanent sub-network connection in a network of connected nodes, the method comprising:

discovering neighbors of each node in the network of connected nodes and link status with a signaling and routing protocol;

distributing routing topology information and optimal route determination with the signaling and routing protocol;

defining a route including a working path for a permanent sub-network connection in the network of nodes from an ingress node to an egress node, wherein the route is defined explicitly, automatically through the signaling and routing protocol, and in combinations;

defining a time out period to be associated with the permanent sub-network connection and initiated in response to the detection of a failure in the permanent sub-network connection, the time out period defining a time over which the failure in the permanent sub-network connection is permitted to be corrected prior to a tear down of the permanent sub-network connection;

provisioning the route;

distributing a route description to each node along the route from the ingress node to the egress node; and

configuring each node along the route in accordance with the route description to provide data traffic services from the ingress node to the egress node;

² U.S. Pub. No. 20030086368 ¶[0093]

wherein the permanent sub-network connection comprises a permanent grouping of one or more paths that pass through a node in the network which is set up and torn down with *the* signaling and routing protocol.

With regard to independent Claim 14, Applicants have added two similar additional method steps as presented herein in Claim 1. Additionally, Applicants have included the limitations in dependent Claim 17 in Claim 14 and canceled Claim 17. Applicants have also added in the limitation of the route information being received from the signaling and routing protocol into the limitations from Claim 17. Finally, Applicants have removed the previously added limitations related to mesh structure and SONET/SDH.

Specifically, independent Claim 14 has been amended to recite:

14. A method for deallocating resources in a permanent sub-network connection, the permanent sub-network connection defining a connection between an ingress node and an egress node in a network of connected nodes, the method comprising:

discovering neighbors of each node in the network of connected nodes and link status with a signaling and routing protocol;

distributing routing topology information and optimal route determination with the signaling and routing protocol;

detecting a failure in a path included in the permanent sub-network connection between an ingress and egress node;

storing route information associated with the permanent sub-network connection prior to tear down such that at a time for restoring the permanent sub-network connection, no optimal routing determination is required, wherein the route information is received from the signaling and routing protocol;

initiating a predetermined time out period in response to detection of the failure;

determining if the predetermined time out period has expired since detection of the failure;

if the time out period has expired, determining if the failure has been corrected; and

if the failure has not been corrected, deallocating resources associated with the permanent sub network connection; and

wherein the permanent sub-network connection comprises a permanent grouping of one or more paths that pass through a node in the network which is set up and torn down with *the* signaling and routing protocol.

With regard to independent Claim 18, Applicants have added two similar additional method steps as presented herein in Claims 1 and 14. In the detecting step, Applicants have added the limitation of “using the signaling and routing protocol.” In the determining if the path step, Applicants have added the limitation of “responsive to the routing topology information.” Finally, Applicants have removed the previously added limitations related to mesh structure and SONET/SDH.

Specifically, independent Claim 18 has been amended to recite:

18. A method for deallocating resources in a network of connected nodes, the method comprising:
 discovering neighbors of each node in the network of connected nodes and link status with a signaling and routing protocol;
 distributing routing topology information and optimal route determination with the signaling and routing protocol;
 detecting a failure in a path in the network *using the signaling and routing protocol;*
 determining if the path includes a permanent sub-network connection *responsive to the routing topology information*, and, if so, for each permanent sub-network connection:
 initiating a predetermined time out period in response to detection of the failure;
 determining if the predetermined time out period has expired since detection of the failure;
 if the time out period has expired, determining if the failure has been corrected; and
 if the failure has not been corrected, deallocating resources associated with the permanent sub-network connection; and
 wherein the permanent sub-network connection comprises a permanent grouping of one or more paths that pass through a node in the network which is set up and torn down with *the* signaling and routing protocol.

With regard to independent Claim 19, Applicants have added two similar additional method steps as presented herein in Claims 1, 14, and 18. In the detecting and immediately clearing step, Applicants have added the limitation of “using the signaling and routing protocol.” Finally, Applicants have removed the previously added limitations related to mesh structure and SONET/SDH.

Specifically, independent Claim 19 has been amended to recite:

19. A method for deallocating resources in a network of connected nodes, the method comprising:
 discovering neighbors of each node in the network of connected nodes and link status with a signaling and routing protocol;
 distributing routing topology information and optimal route determination with the signaling and routing protocol;
 detecting a failure in a path in the network *using the signaling and routing protocol;*
 immediately clearing resources for all sub-network connections traversing the path *using the signaling and routing protocol;* and
 in response to detecting the failure, waiting a predetermined time out period prior to clearing all resources for each permanent sub-network connection traversing the path; and
 wherein the permanent sub-network connection comprises a permanent grouping of one or more paths that pass through a node in the network which is set up and torn down with *the* signaling and routing protocol.

Therefore, Applicants submit that the rejection of Claims 1-10, 14, 15, and 17-19 under 35 U.S.C. §103(a) has now been traversed and respectfully request that this rejection be withdrawn and that the claims be allowed.

Rejection of Claims 11-13 and 16 Under 35 U.S.C. §103(a) –
Lu, Limaye, Burns, and Mendelson

Claims 11-13 and 16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lu in view of Limaye, and further in view of Burns, and still further in view of U.S. Patent No. 6,343,083 B1 (“Mendelson”). Claims 11-13 are dependent claims depending from Claim 1 or an intervening claim. Claim 16 is a dependent claim depending from Claim 14 or an intervening claim. The above amendments made to and arguments made with respect to Claims 1 and 14 apply with equal force here. Therefore, Applicants submit that the rejection of Claims 11-13 and 16 under 35 U.S.C. §103(a) has now been traversed and respectfully request that this rejection be withdrawn and that the claims be allowed.

CONCLUSION

Applicants would like to thank Examiner for the attention and consideration accorded the present Application. Should Examiner determine that any further action is necessary to place the Application in condition for allowance, Examiner is encouraged to contact undersigned Counsel at the telephone number, facsimile number, address, or email address provided below. It is not believed that any fees for additional claims, extensions of time, or the like are required beyond those that may otherwise be indicated in the documents accompanying this paper. However, if such additional fees are required, Examiner is encouraged to notify undersigned Counsel at Examiner's earliest convenience.

Respectfully submitted,

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